

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION.

Improvements in or relating to Reels for Fire Hose and the like.

We, J. S. SMITH, LIMITED, of Goldsmith Place, Sherwood Street, Nottingham, a British company, and REGINALD SMITH, of the same address, a British subject, do hereby declare the nature of this invention to be as follows:—

This invention comprises improvements in or relating to reels for fire hose and the like, and has particular, although not exclusive, reference to fire hose reels which are rotatably mounted in convenient positions in factories, public buildings, or institutions so as to enable the hose coiled thereon to be drawn off and extended for use when required.

Heretofore it has been the custom to mount this class of reel within stationary bearings, the reel being capable only of rotary movements on its axis. With this arrangement, however, the disadvantage exists in that some difficulty is encountered in drawing off the hose when it is required to extend same in a direction substantially parallel with or at an acute angle to the reel axis, and it is an object of the present invention to overcome this disadvantage, and enable the hose to be withdrawn from the reel with equal facility in any direction.

The principal feature of the invention consists in mounting a fire hose or like reel so as to be rotatable on its axis and also capable of being swivelled or rotated on an axis at right angles to the reel axis.

Another feature resides in rotatably mounting the reel within bearings in a U-shaped bracket which is mounted to swivel on a vertical axis in a stationary bracket or standard.

A further feature consists in the provision of means for removably retaining the reel in any one of a plurality of

positions in the extent of its swivelling movement.

In one method of carrying out the invention, the reel may be of any known construction with end flanges and stub axles projecting therefrom for accommodation within bearings, either or both end flanges having a hand wheel incorporated therewith for enabling the coiling of the hose upon the reel to be effected.

In this invention, the bearings for the reel axles are provided at the upper ends of two upstanding arms of a U bracket, which bracket may be of T section.

Centrally formed in the width of the horizontal bar portion of the U bracket is a cylindrical boss with its axis vertical, which boss rotatably accommodates a short spindle portion projecting upwardly from the outer end or part of a wall bracket or from the upper part of a suitable standard or frame, a flange or collar formed at the base of the short spindle portion constituting a shoulder upon which the boss of the U bracket bears.

It will be appreciated that an arrangement as above forms a swivel mounting for the reel carrier and permits of said reel and U bracket being swung round on a vertical axis.

To enable the reel to be adjustably held in any one of a plurality of positions in the extent of its swivelling movement, and obviate an uncontrolled swinging of said reel and carrier while withdrawing the hose, a spring-pressed pin is slidably accommodated within a short tubular housing projecting laterally from the cylindrical boss on the U bracket, the spring acting on a collar or enlargement on said pin normally to press a rounded nose of said pin into engagement with any one of a series of

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circumferentially disposed grooves or notches formed in the short upstanding spindle on the wall bracket or the like.

The grooves or notches may be formed by providing a series of rounded teeth on the spindle, and said grooves preferably extend round said spindle for a distance of approximately one half the circumference only.

The pin and spring may be retained in the tubular housing by a screwed end closure which may have a central guide hole for the outer end of the pin.

If desired the one end bearing of the reel may have associated therewith in the known manner a suitable stuffing box with elbow pipe extending therefrom for receiving the one end of a flexible pipe portion which extends to

the water main or other water supply pipe. The one end of the hose on the reel is connected to the one end of a pipe portion communicating through the end bearing and stuffing box with the water supply pipe, while the other end of said hose carries the customary nozzle.

It is to be understood that the invention may be applied to any type of hose reel or similar reel.

Dated the 28th day of January, 1926.

ERIC POTTER,
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London, W.C. 2, and
Commerce Chambers, Parliament Street,
Nottingham.

COMPLETE SPECIFICATION.

Improvements in or relating to Reels for Fire Hose and the like.

We, J. S. SMITH, LIMITED, of Goldsmith Place, Sherwood Street, Nottingham, a British company, and REGINALD SMITH, of the same address, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention comprises improvements in or relating to reels for fire hose and the like, and has particular, although not exclusive, reference to fire hose reels which are rotatably mounted in convenient positions in factories, public buildings, or institutions so as to enable the hose coiled thereon to be drawn off and extended for use when required.

The class of reel to which this invention refers is that which is mounted to rotate upon its axis within a suitable bracket, which bracket is itself mounted upon a support so as to swivel about an axis at right angles to the axis of the reel, thus enabling the hose to be withdrawn from the reel with equal facility in any direction.

A feature of the present invention consists in a fire hose or the like reel of the above named type characterised in that the bracket within which the reel is rotatably mounted is carried by and capable of a swivelling movement relatively to a second bracket or member which is, in turn, connected by hinge or swivel connection to a suitable support.

Another feature consists in mounting the reel-carrying bracket to swivel upon a two part bracket or equivalent support, one part of which is fixed to a wall or other support and the other adapted to swivel relatively to said fixed part about a vertical axis.

A further feature resides in providing at the swivel joint between the reel-carrying bracket and the hinged or swivelling portion of the two part supporting bracket a spring influenced member for removably retaining the said reel-carrying bracket automatically in any one of a plurality of positions in its swivelling movement.

Other features of the invention reside in the construction and arrangement of reel-carrying means hereinafter more fully described and set forth in the appended claims.

In order that this invention may be clearly understood same will now be described with reference to the accompanying sheet of drawings wherein:—

Fig. 1 is a front elevation of a fire hose reel and its mounting constructed and arranged in accordance with this invention, and

Fig. 2 is a sectional detail view on line A—A of Fig. 1.

In one method of carrying out the invention, the reel 1 may be of any known construction with end flanges 2 and stub axles 3 projecting therefrom for accommodation within bearings 4, either or both end flanges having a hand wheel 5 incorporated therewith for enabling

ling the coiling of the hose 6 upon the reel to be effected.

In this invention, the bearings for the reel axes are provided at the upper ends of two upstanding arms 7a of a U bracket 7, which bracket may be of T section.

Centrally formed in the width of the horizontal bar 7b portion of the U bracket 7 is a cylindrical boss 8 with its axis vertical, which boss rotatably accommodates a short spindle portion 9 projecting upwardly from the outer end or part of a wall bracket 10 or from the upper part of a suitable standard or frame, a flange or collar 11 formed at the base of the short spindle portion constituting a shoulder upon which the boss of the U bracket bears.

It will be appreciated that an arrangement as above forms a swivel mounting for the reel carrier and permits of said reel and U bracket being swung round on a vertical axis.

To enable the reel to be adjustably held in any one of a plurality of positions in the extent of its swivelling movement, and obviate an uncontrolled swinging of said reel and carrier while withdrawing the hose, a spring-pressed pin 12, see Fig. 2, is slidably accommodated within a short tubular housing 13 projecting laterally from the cylindrical boss on the U bracket and indicated by a dotted circle in Fig. 1, the spring 14 acting on a collar or enlargement 15 on said pin normally to press the rounded nose of said pin into engagement with any one of a series of circumferentially disposed grooves or notches 16 formed in the short upstanding spindle 9 on the wall bracket or the like.

The grooves or notches may be formed as shown by providing a series of rounded teeth on the spindle, said grooves preferably extending round said spindle for a distance of approximately one half the circumference only.

The pin and spring may be retained in the tubular housing by a screwed end closure 17 which may have a central guide hole 18 for the outer end of the pin and in order to prevent the hose reel from undesired vertical movement on the spindle 9 a set screw 19 may be provided passing through the boss 8 and engaging a circumferential groove 20 formed in the spindle 9.

To further facilitate the withdrawing of the hose from the reel in any direction the wall bracket 10 is formed in two or more parts hingedly connected together. In the preferred arrangement illustrated the bracket is formed of two members 10a and 10b upon one vertical

edge of each of which is provided a pair of laterally projecting circular lugs or bosses 21 through which a vertical rod or spindle 22 is passed, the said spindle being secured by means of pins or other suitable means in the lugs projecting rearwardly from the part 10a of the wall bracket. The lugs 22 projecting forwardly from the bracket portion 10b, which is adapted to be secured to a wall or other suitable support, are preferably positioned intermediate the lugs on the part 10a on the spindle 22. The bracket portion 10a carrying the U shaped support for the reel 1 is adapted to swivel about the vertical spindle 22 and be retained in any one of a number of positions in its movement by means of a spring 23 encircling the spindle and holding pin 24, passed diametrically therethrough and projecting therefrom, into engagement with notches 25 formed in the upper face of the lower lug 21 on the fixed bracket portion 10b.

If desired the one end bearing of the reel may have associated therewith in the known manner a suitable stuffing box 26 with elbow pipe 27 extending therefrom for receiving the one end of a flexible pipe portion which extends to the water main or other water supply pipe. The one end of the hose 28 on the reel is connected to the one end of a pipe portion 29 communicating through the end bearing and stuffing box with the water supply pipe, while the other end of said hose carries the customary nozzle 30 the reel and its mounting being adapted to be secured to any convenient wall or support by means of the vertical flange 31 of the bracket 10.

It is to be understood that the invention may be applied to any type of hose reel or similar reel.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A fire hose or like reel axially rotatable within bearings in or upon a bracket characterised in that said bracket is carried by and capable of a swivelling movement on an axle at right angles to the reel axis relatively to a second bracket or member which is in turn connected by a hinge or swivel connection to a suitable support.

2. In a fire hose or like reel as claimed in Claim 1, mounting the reel-carrying bracket to swivel upon a two part bracket or equivalent support, one part of which is fixed to a wall or other support and the other adapted to swivel

relatively to said fixed part about a vertical axis.

3. In a fire hose or like reel as claimed in the last preceding claim the incorporation at the swivel joint between the reel-carrying bracket and the hinged or swivelling portion of the two part supporting bracket of a spring influenced member for removably retaining the said reel-carrying bracket automatically in any one of a plurality of positions in its swivelling movement.

4. In a fire hose or like reel as claimed in any of the foregoing claims the provision of a spring-pressed pin or plunger carried by a U-shaped bracket bearing the reel, said pin or plunger being adapted to engage one of a plurality of grooves, slots or projections in a spindle about which said bracket swivels and removably retain the bracket and reel in any one of a plurality of positions in their swivelling movement.

5. In a fire hose or like reel as claimed in the last preceding claim mounting the spring-pressed pin or plunger member with a cylindrical housing provided on a boss, formed centrally in the hori-

zontal portion of the U-shaped bracket and adapted to receive the spindle about which the said bracket swivels.

6. In a fire hose or like reel as claimed in any of the foregoing claims the provision of means for retaining the swivelling part or parts of the bracket which supports the reel-carrying bracket in any one of a plurality of positions in its movement.

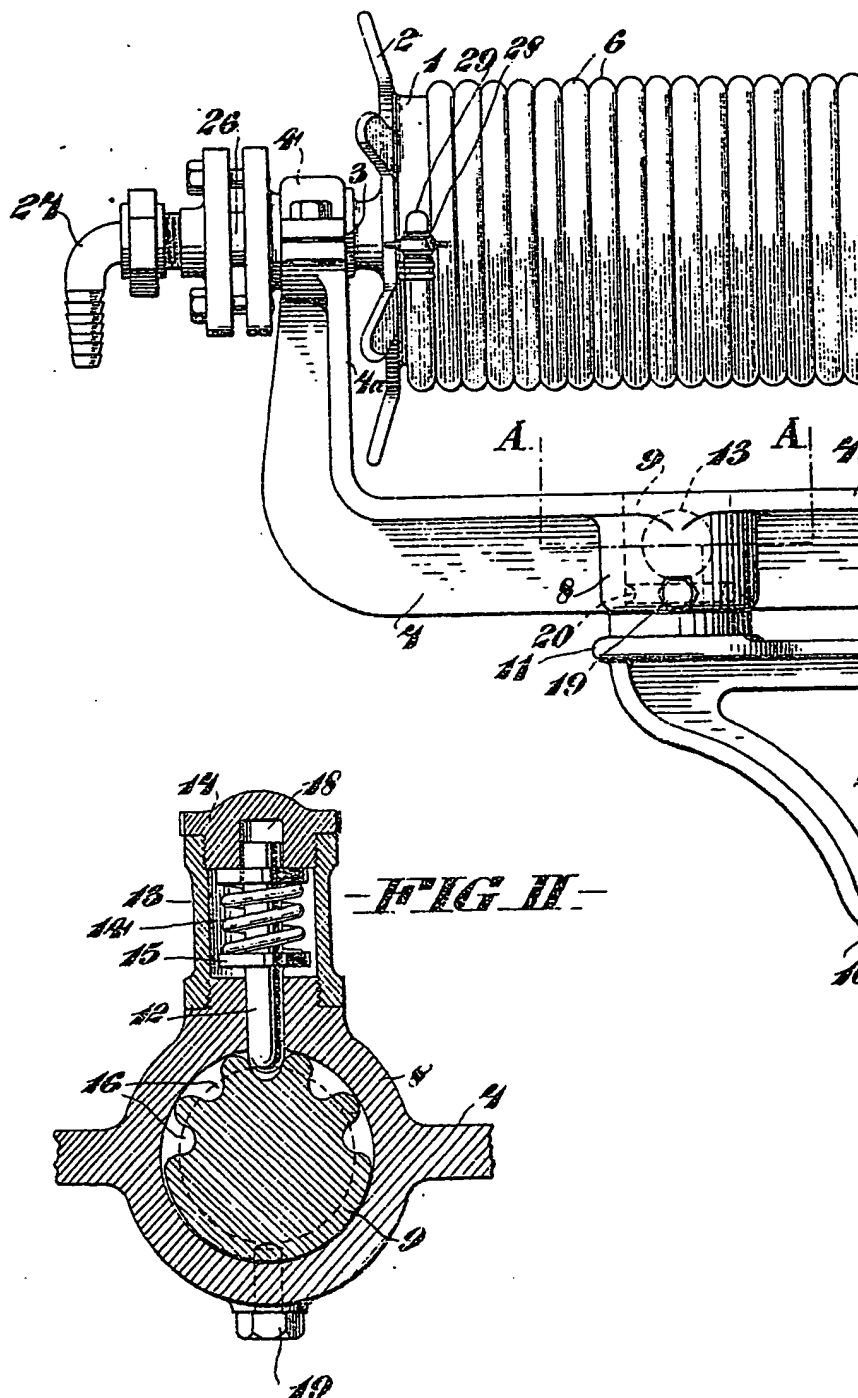
7. A fire hose or like reel as claimed in any of the foregoing claims having means for preventing vertical movement of the reel and its mounting, substantially as described.

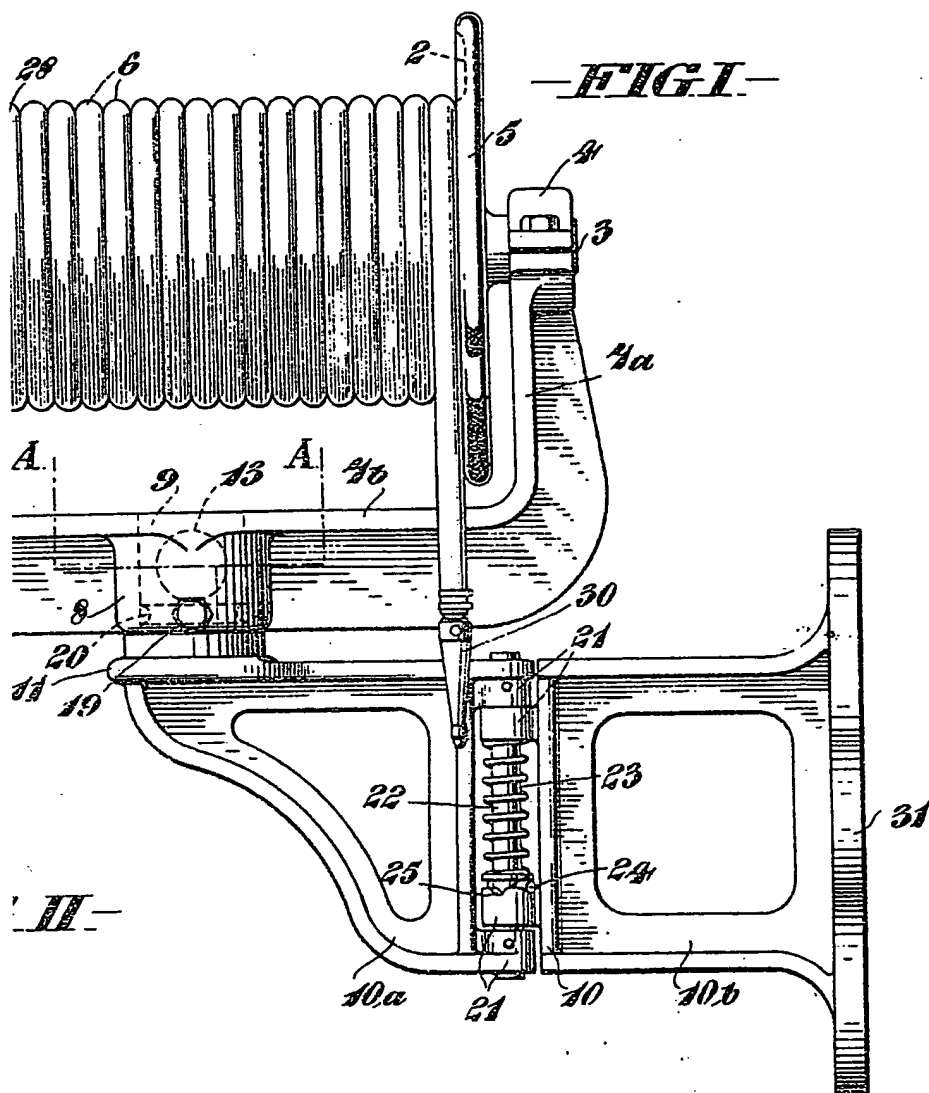
8. A fire hose or like reel constructed and arranged substantially as hereinbefore described and illustrated in the accompanying drawings.

Dated this 22nd day of September, 1926.

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Commerce Chambers, Parliament Street,
Nottingham.

[This Drawing is a reproduction of the Original on a reduced scale.]





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